

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 25 JAN 2005
WIPO PCT

Applicant's or agent's file reference BP107701	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI2003/000798	International filing date (day/month/year) 27-10-2003	Priority date (day/month/year) 28-10-2002
International Patent Classification (IPC) or national classification and IPC G01C 22/00, A63B 69/00		
Applicant CLOTHING PLUS OY et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input checked="" type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 26-05-2004	Date of completion of this report 11-01-2005
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>3, 7, 9, 10, 13</u>	YES
	Claims	<u>1, 2, 4-6, 8, 11, 12, 14</u>	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-14</u>	NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

The claimed invention relates to a distance meter. The invention aims at bringing a solution to the special issue of how to count the number of laps carried out by an object moving around a given track. Further, the invention relates to the problem of how to measure the distance covered without the trainer having to concentrate on counting the number of laps.

Documents cited in the International Search Report:

D1: WO 0067858 A1	D4: US 4530105 A
D2: US 5661398 A	D5: US 4703445 A
D3: EP 1250887 A2	D6: US 4991126 A

Documents D5 and D6 represent the general state of the art.

Document D1, which is considered to represent the closest prior art, discloses an apparatus for determining when a swimmer turns at the completion of a lap. This event can then be used to determine a variety of useful data such as the number of laps swum, and the distance covered by the swimmer (page 4, lines 21-27). Magnetic sensors, with substantially stationary directions relative to the swimmer, are fastened to the swimmer (page 5, line 13-page 6, line 2; page 11, lines 12-20). The sensors measure orientation changes as a result of changes sensed in the orientation of the earth's magnetic field relative to the sensors. A change of direction that is close to 180 degrees is sensed and will be detected as a turn. The number of turns is then counted. The apparatus in D1 is

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

mounted in a housing that fits over an ear of the swimmer (fig.4).

Documents D2-D4 also disclose apparatuses for measuring the distance (or number of laps) covered by a person. The apparatuses disclosed in D2-D4, all use sensors that measure the earth's magnetic field bearing. See column 5, line 48-column 6, line 17 in D2; column 2, line 45-column 4, line 40 in D3; column 3, lines 7-10 and claim 1 in D4.

The invention according to claims 1 and 6 is already known from D1 and the invention according to claims 1 and 6 therefore lacks novelty.

Also, note that the invention according to claims 1 and 6 is known from documents D2-D3, and lacks an inventive step in the light of document D4.

The apparatus in D1 calculates the distance covered by the swimmer. Therefore, the length of the basin must have been fed into the apparatus (distance covered is determined by the counted times and the fed length). The apparatus includes control buttons for selection of options and settings (page 8, lines 13-19). Further, the apparatus includes a device for data transmission communication with an external device (claim 12) and the apparatus can indicate when an interval set has finished.

The invention according to claims 2, 4, 5, 8, 11, 12 and 14 is already known from D1 and therefore lacks novelty.

The apparatus in D1 includes a sensor for measuring the vertical magnetic component (page 6, lines 11-20). This information could probably be used to detect when the swimmer is in a vertical position. Therefore, the invention according to claim 9 lacks an inventive step.

The apparatus in D1 includes means to automatically detect when a swimmer starts or stops swimming (page 9, lines 14-16).

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
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It is not considered to involve any inventive work for the skilled person to include means for determining whether the apparatus is being worn or not by the user. Therefore, the invention according to claim 13 lacks an inventive step.

The subject matter of the remaining claims, i.e. means for fastening the sensor, means for consistency evaluation and that a decision about continuing the measurements is made on the basis of detected position and fed type of sport, is only considered to constitute details obvious for a person skilled in the art. Therefore, the invention according to claims 3, 7 and 10 fails to involve an inventive step.

The invention according to claims 1-14 is considered to be industrially applicable.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Patent claim 6 mentions that the distance meter is arranged to "decrease the value of the counter". However, the value should probably be increased.

In the description (page 10, line 15), the magnetic sensor has the reference 210. However, the reference 210 is, according to figure 2, a battery.